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Theoretical and methodological approaches to management of resource flow processes of development projects on macro-, mezzo-, microlevels

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Abstract. Paper is devoted to the actual problem of managing resource flows of development projects as complex, unique, and open systems, across the different project lifecycle stages that differ in content and are distributed in space and time. The idea was to create a single throughout system for managing resource flow processes of the long-term projects. The research goal included development of theoretical and methodological approaches that can be used in order to manage the combination of development project resource flows using “order from chaos” paradigm. That includes by-stage organization of resource flow processes on of macro-, meso- and microscale, going from sources and sinks of the chaotic project environment resolve to ordered stages of project life cycles. It is proposed to implement resource flow management in form of the stage and resource-based “project-logistic” relay of a triune movement, ordering and transformation of the resource flow processes. This relay is created within a project-logistic field of project management that change by project phases. Synergetic effects of self-organization and self-control appear in the project logistic field due to horizontal interactions, sharing experience, competences, and values among the stakeholders in course of transforming entropic resource-flow processes into the negentropy processes related to project phase goals (attractors). Results can be used to forecast and develop multilevel resource-flow and process systems arranged by resource sources and sinks, and chaotically ordered for projects in different application areas. Further research perspectives include development of self-control and self-organization forms for development projects stakeholders that would comply with international best practices, and fit corresponding project stages.

Keywords: chaotic resource environment, resource sources and sinks, flow ordering and “transformations”, entropy, negentropy, attractor stages, project-logistic paradigm, project-logistic relay, project-logistic field.

1. Introduction

The project management is a special kind of management. It is different from business management by socio-economic systems and from management of organizationally cyclic productions and multi reproducible technological operations in different spheres of industry. Project management contents sphere of management of traditional investment-building projects (IBP) for creating objects of estate

and development projects (DP) for creating, operation and improving these objects. DP is different from IBP by more significant (in many times) period of life cycle (LC) and much bigger diversity of their project dependent, technologically interconnected phases.

Except preinvestment, investment and less operation phase, realized in traditional or called as "terminal" IBP with named cost and finish periods [1] (in the frames of classical project paradigm), long LC of DP includes phases of repair, reconstruction and modernization of created estate objects, that are changed with their operation phases. Also – finish project phases, liquidation of these objects and forming new project concept [2].

In the practice of project management [3] the phases of LC of DP are detailed by certain, numerous and spaced apart in time and space project-ordered organizationally and technological steps (OTS). In flows of different steps of projects: initialization, concept, marketing and technological and economic project justification; sequential tendering; identify land territories; project, building and operation of creation estate objects as new values; purchase and sale estate objects or their territories and registration of ownership or lease (with providing benefits of investment); production, sale and service in a process of operation of estate objects; reconstruction of buildings, modernization of current production with future operation periods of improving estate objects; finish projects; liquidation of estate objects; creation and development initiatives and concepts of new project development of creation more perfect estate objects etc.

In this context DP is a project of full cycle or developing projects, which have not got named periods of operation and finish goals and can be with open data of their finish [1]. According to this DP is more open and complex space-time and organizationally technological system [3]. This system is formed in flows of different OTS of project LC by interaction and numerous participants (stakeholders) [4], which are like a flow of step by step changing by composition, qualification and quantity of management subjects.

The main goal of long process of development and realization of DP is an achievement of desirable results. Reference points definite by this goal for goal for another levels, for example, for providing OTS of project LC by necessary resources and rational management of all kinds of resource flows.

In this paper resources are that resources of different origin and features which are distributed randomly (chaotic) in space and time of external environment of projects. Energy, labor and financial, informational, service and other kinds of resources are material too. Different processes related to resource flows are formed by numerous stakeholders on the base of need in these resources.

It is obviously that these processes can't be out of space and time period, other words without their beginning and finish. They are from something external and chaotic (to DP) resources on the macro -, mezzo- and micro-resource level and finish in something stocks on these levels and numerous OTS of projects (objects).

Resource flows permeate all OTC of DP LC. According to this their activity is in straight, consistent or parallel directions, for example, activity of material, labor and energy recourses and in counter flows – for example progressive-return activity of information, financial and other kinds of flows. Therefor DP can be like flow systems by sequence of different OTC and their LC and activity of different and step by step conditioned resource flows and by changeable composition of stakeholders on different stages of project.

Numerous and interested in, responsible and interconnected legal entities and individuals with their goals, interests and values are stakeholders of management of resource flows. Namely: project initiatives and customers; investors and developers as the main stakeholders; general and sub-contractor; owners, operated new buildings; realtors and appraisers; sellers, customers and tenants of estate objects; designers, producers and suppliers materials, constructions and equipment; energy organizations; banks, control branches and public organizations; property rights registers, service and production consumers etc. [2,3].

Every stakeholder in the coordination and in interconnection with each other once upon a time makes special functions of realization their OTS that is named by "from a list" without right for

mistake and without opportunities of some repeat and of forming and management of step by step recourse and flow processes.

The complex of management of resource and flow processes of DP from one side is sequence and recourse content of project OTS that is strictly ordered. By the way created, operated and modernization property objects for a long time are coordinate set and territorial fixed. From another side geography of excess external resource environment of projects on the macro-, mezzo-, micro levels is no definition and chaotic and globally distributed among sets of different level resources and stocks of the most different resources.

To the peculiarities of the resource management of the processes of DP realization, you can also add the fact that at each of the above-mentioned OTS, flow processes of one nature at subsequent stages resource flows of qualitatively different types arise ("generate"). Therefore, in addition to the problems of managing the processes of movement and the step by step ordering of resource flows, it is also necessary to consider the problem of managing some of their quantitative and qualitative changes ("transformations") occurring at the OTS borders. For example, the "transformation" of information flows of ideas and project concepts into resource flows necessary for the creation of real estate materials, energy and finance. Such resource-transformational processes of the "beginning-finish" of one and the "end-start" of others, the same or different in their origin of resource flows, objectively occur throughout the life cycle of the DP.

All this predetermines the uniqueness of the resource flow management processes in the space and time of their resource-chaotic external environment and before the organization of internal (intra-project, intra-object) resource-ordered flows according to strictly defined OTS life-cycle. And as a result - the need to find a new theoretical and methodological approach (new paradigm) to solving the problems of managing resource flows of DP.

In this regard, the goal of the study is to develop a new project and logistically informative theoretical-methodological approach to the formation of a management system of resource-flow processes of long-term, complex and one-time implemented DP.

The scientific novelty of the research will consist in the development of the theory and methodology of project-logistic management of resource-flow processes of unique DP, which is distinguished by design-informative and step by step detailed (not only in phases) level of their description and structuring. It should include made by stakeholders based on the new order "out of chaos" paradigm, managing the triune process of movements, ordering and "transformations" of resource flows from the chaotic resource environment of projects and towards different, numerous and ordered OTS of their life cycle.

The theoretical significance of the study is to develop, on the basis of the proposed paradigm of new project and logistical approach to managing the realization of the DP as a set of different in their nature and randomly-ordered streaming processes. Practical significance is in the development of legitimate scientific and practical methods for the stepwise and end-to-end management of the resource flows of unique DP. They are proposed to be implemented on the basis of the step by step "project and logistic relay race" of movements, orderliness and qualitative and quantitative "transformations" of the project resource flow processes. This "relay race" can be implemented in the subject-object and management structure that changes in time and space in the form of a globally step by step object - the "project-logistic field" of the flow management of DP resources.

2. The goal and challenges of the management of resource flow processes of DP.

With the acceleration of innovative processes in the technological and organizational and managerial sphere of PD and, consequently, because of increasing the rate of change of OTS and a reduction in their duration over time, the goal of developing a unified theoretical and methodological approach to project and logistics management of a through set of various resource flows is becoming more important. It is especially for large infrastructure projects.

To achieve formulated above goal, the following challenges were set and solved: to investigate the substantive content and possible stepwise changes in the resource-flow processes of DP; based on the

analysis of existing logistics concepts to justify the need to form a new theoretical and methodological approach (paradigm) to the stepwise management of various resource flows throughout the life cycle of DP; to substantiate the possibility of creating an end-to-end project-logistic system of managing the triune process of movements, orderliness and “transformations” of various resource flows of DP with a step by step change of project stakeholders; to form a unified and dynamically changing subject-object project and logistic structure for the step by step management of project resource flows throughout their life cycle.

The object of this study is the methodology for the management of DP in the phases of creation and operation, reconstruction and modernization, closing projects and liquidation of estate objects.

The subject of the research is the theoretical and methodological approaches to the organization and management of resource flow processes in the OTS of the life cycle of DP.

A new theoretical and methodological approach to the management of resource-flow processes of DP should provide the overcoming of objectively occurring entropic effects of uncertainty and chaos in the management of resource flows and the formation of positive (non-entropic) organizational and managerial synergistic effects.

3. Existing scientific and practical approaches to the management of resource-flow processes.

Well-known theoretical and methodological approaches to the organization and management of resource and logistics flows [5] are related, as a rule, to the sphere of continuous, mass, serial or multiseries industrial production and to technologically regular and cyclical processes of local production character by place and time.

In recent years, quite extensive scientific research has been conducted in the sphere of logistic industrial production of developing the theory and methodology [6, 7, 8], logistic concepts [9] and strategies [10], methods [11] and models [12, 13] of management of resource flows between suppliers, consumers and carriers and, in particular, along “supply chains” and “logistic channels” [14, 15]. The focus of this work was on warehousing (inventory management), production, procurement, supply and sales, workshop, transport [16] and trade and intermediary logistics at enterprises of various industries.

In a number of foreign works, based on the development of a logistics methodology [17] and strategic approaches to its management [18], challenges were also solved on the formation of concepts, methods and models of logistics management [19, 20] and the project of efficient logistics systems (“supply chains”) [21] in the sphere of industrial production.

When analyzing them, it can be noted that the local production and sales logistics system of industrial enterprises is primarily focused on satisfying the demand of numerous consumers (customers) for their products through the supply chain. And its main challenges is to ensure equality in the rate of production of goods to the rate of deliveries on customer orders. At the same time, a high organizational level and cyclical nature of the technological processes of industrial production provides the possibility of multiple repetition and improvement of the “supply chain” management methods. Therefore, the management of cyclically ordered logistic "supply chains" in the industrial mode of production of products remains one of the main resource-flow methods [15].

In contrast, the project-building and step by step method of creating and operating, reconstructing, modernizing and continually improving estate objects with realization of complex and unique DP is characterized by its one-timeness, non-repeatability, and the considerable length of their life cycle, as well as the multiplicity and uncertainty of resource-flow processes, that together requires a completely different management approaches.

Resource and logistics research was also conducted on the problems of resource management and in the sphere of traditional IBP. So, for example, in the work of Kubasova T.I. [22], emphasis was placed on project logistics as an applied direction related to the transaction costs of project participants and the development of the resource concept. S.G. Kiyko [23] devoted his work to the important but narrow issue of modeling the processes of movement of financial resources during the realization of the enterprise’s project.

In the foreign scientific literature there are no scientific and methodological approaches to the management of resource-flow processes in the sphere of development in the phases of creation, development and improvement of estate objects or their OTS. Existing researches on this subject, as a rule, in the paradigm of “supply chains”, are limited to the phases of the creating estate objects in the implementation of construction projects, or to individual aspects of managing their resource flows. [24, 25, 26, 27, 28] For example, a description of the supply system for construction projects; optimization of supply chains in a construction project, etc.

In contrast to construction projects, in the process of realization of long-term DP, there is a significantly greater uncertainty, openness and non-linearity of the system for managing resource-flow processes carried out by different and step by step teams of stakeholders. Certain contours in the approaches to the study of resource flow processes in the realization of DP were outlined in an earlier work of one of the co-authors of these studies [25].

Thus, it can be stated that the existing and most common logistic concepts (paradigms) for managing resource flows, mainly in industrial production, cannot meet the requirements for managing flow processes during the realization of OTS of unique DP. In the new theoretical and methodological approach to the management of resource and flow processes of OTS of DP, all above features of the realization of these projects and their resource flow management processes should be taken into account.

4. Research method

The main difficulty in developing a research method and substantiating a new theoretical and methodological approach to managing project-logistic resource-flow processes of DP is that the theory of project management is not a science in its strict sense. Created, in the process of realization of unique DP, estate objects can not be returned to their original position and re-created in the best way. It is also impossible based on the theory of project management alternative experimentation in the process of creating these objects or returning them to the initial state.

This is directly related to the management of resource-flow processes of DP. It is also impossible to "experiment" on the withdrawal of the property already used resources and replacing them with others, as well as the appropriate formation of return material and energy and other types of flows to the starting point.

It is also known that the theory of logistics is a theory of descriptive type, which generalizes and organizes the best practices of managing resource flow processes in industrial production, investment and construction, and in other activities.

Based on these provisions, the idea of a new theoretical and methodological approach consisted in a subject-specific step by step analysis of the flow and in a step by step description of the entire set of project-logistic processes of managing various resource flows of DP. The processes of movement, streamlining and “transformations” of resource flows were tracked from the excessive resource environment of projects at the macro, mega and micro levels and further in the direction to the project-defined and ordered OTS of life cycle.

According to the results of the analysis, a paradigm of a new project-logistic resource-flow approach to managing a spatio-temporal and randomly ordered variety of flow processes towards OTS projects can be synthesized as stepwise attracting attractors — future desirable states [30].

In this aspect, the management and self-management processes of the various resource and logistic flows of DP will be built up taking into account the formation of a system of some “virtual” resources. Namely, on the basis of goals, interests and responsibility, the effects of interaction and the mutual influence of stepwise changing project stakeholders, as mutually supporting subjects of managing resource flow processes. At the same time, DP stakeholders, overcoming the entropy resource flow chaos of the external resource environment of projects, will have to form certain non-entropic

impulses[1] to streamline resource flows and systemic effects of self-organization and self-management [34], focusing on their OTS-attractors of their LC [31, 32, 33]. That, in turn, will allow the emergence of organizational and managerial synergistic effects [35, 36, 37] in the project and logistics of DP.

5. Project and logistic approach to management of resource flow process of DP

"Open flow-type systems" [38], in which self-organization processes can occur, belong to the class of complex non-linear systems that have the properties of self-regulation and self-management and are capable of being attracted to certain intended goals. Nonlinear systems are influenced by random small effects generated by their nonequilibrium and instability. This effect is expressed in the accumulation of fluctuations, in the increase of bifurcations and in the spontaneous transitions of these systems from one state to another [34], which impede the achievement of intended results or require effective organizational and managerial decisions. Such systems can be attributed to the management systems of a vast set of DP resources that are different in their nature, subject to numerous random influences in the excessive resource environment of projects, as well as design and logistic processes during the realization of project oriented OTS projects.

As it is known, the paradigm of a general managerial nature adopted in the theory of logistics - "improving the management of resource supplies" was formulated without taking into account the specifics of the main production-technological or project-specified processes. Therefore, in the development of this paradigm for the sphere of highly organized and technologically advanced industrial production, it was developed substantial and widely used production-logistic and process-logistic resource-management concepts (paradigms) - supply chain management, "just in time", "Kanban" and other.

It can be also traced a certain evolution of the management paradigms for traditional IBP - from managing the cost, timing and quality of project realization to managing the complexity, efficiency and values of projects and further to managing regular interaction with customers of projects in Agile models. In this aspect, for the realization of DP it is also required its own, taking into account their substantive specificity, the project and logistic paradigm of managing resource flows in space and time. Such a project-logistic paradigm of managing incremental processes of movement, orderliness and various "transformations" of resource flows is the "orderliness out of chaos" paradigm as ordering flow processes through OTS projects from the "chaos" of their external resource environment[2].

The application of this paradigm to the processes of managing resource flows of DP is due to the following factors: a variety of project-logistic resource-flow processes that are complex and open, non-linear and multi-component, self-organizing and self-regulating system; the formation by stakeholders of DP of resource flow processes from spatio-temporal and resource-chaotic "sources" and "drains", distributed ("scattered") in some random way at macro, mega and microresource levels; objectively necessary step by step goal orderliness of various resource flows in the direction to the project-specific OTS of projects as goal attractors and their completion at each stage; multiple, objectively and constantly occurring quantitative and qualitative "transformations" of resource flows at the boundaries of the transition from one OTS of projects to another; the interaction of numerous and variable in composition and size, experience and qualifications of project stakeholders to achieve their goals on specific OTS and the overall results of the realization of DP based on trust, mutual exchange of competences and values of activities.

The need to develop a project-logistic paradigm "ordering out of chaos" for an open system of organization and management of resource flow processes of DP can be justified by the following

[1] Hazen A.M. Incorrectness of the non-entropic principle of L. Brillouin // [www.kizsoft.com.ru/intell/KSNews_62.htm / (the data of issue: 10.11.2018).

[2] It is required also for the sphere of for example military (destroyed) projects the development of specific military-logistic paradigm of management of resource flow of war purpose from random and resource environment and to direction of random fronts of war activities also for the sphere of for example military (destroyed) projects.

arguments: the objective complexity of implementing rational management of numerous flow processes of projects from a single center; excessive diversity of the external resource environment of the projects compared to the resources necessary for their realization; the presence of elements of uncertainty and chaos in the management system of flow processes; the emergence and disappearance in time and space of the realization of the OTS of a number of initiative “centers” of self-management and self-organization of stakeholders, complementing the “necessary diversity” of methods, mechanisms and tools for managing the entire set of DP resource flows.

In this case, the project-logistic management paradigm acts as the prevailing conceptual position and the main trend of targeted actions by the participants in the management of resource flow processes of DP. Its application to the field of motion, orderliness and “transformations” of the resource flows of DP that is open and mutually agreed between the stakeholders of the projects is reasonable. At the same time, the end-to-end management of this triune process will represent, in space-time coordinates, a global flow and project-object management mechanism in the form of a step by step resource and randomly ordered “project-logistic relay race (PLRR)” of resource flow processes through LC of OTS projects.

The key point in the proposed mechanism is that the PLRR of the resource flow processes is objectively determined and supported, in turn, by the “relay race” of goals, interests and value attitudes of numerous and step by step changing stakeholders of DP who are interested, interacting and responsible for the results of realization of individual OTS and projects in a whole. The above-described step by step interactions and changes in both subjects and DP objects in the process of managing resource flows is allowed to form, based on the project and logistic management paradigm, “orderliness from chaos” and on the basis of PLRR, a subject-objective, spatial-temporal and step by step changing project management structure - “project-logistic field (PLF)” of resource flow project management during their long-term life cycle.

Thanks to a new theoretical and methodological approach, the activities of stakeholders in managing multiple resource flow processes of DP acquires, taking into account the project and logistics paradigm, a substantive and semantic focus, leading to organizational and managerial synergies in managing resource flows and, ultimately, to step by step planned project results.

6. Forming project logistic structure of resource flow process management of DP

How do they arise, where do they originate from and how are future DP formed? Apparently, from some transcendental spheres, tangible or intangible by people at the level of knowledge and sensations, insights or faith, often outside their consciousness, cognitive abilities and skills. These areas act as global informational unordered "chaos sources" and "chaos-flows" of ideas, concepts and theories developed somewhere, once and by someone. By analogy with this, ideas and concepts of their resource provision and some methods of project and logistics management of various resource flows of projects can also formed by the participants (stakeholders) in the realization of future DP.

Based on the need to form a specific set of resources for future DP, project stakeholders identify and analyze information spheres about external and randomly scattered in space and time “sources” and “flows” of material, energy, financial and other types of resources and possible resource flow processes with a high level of uncertainty and chaos (entropy).

Resource flows generated in such a way from the externally chaotic environment of projects under the influence of project-defined goals and taking into account interests and interactions of stakeholders are then transformed into intraproject (intra-object) and step by step (non-entropy) processes in time and space. The sequence and interaction of these processes sets the step by step PLRR of the various resource flows in all OTS of LC of DP.

Figure 1 shows one of the numerous stepwise fragments of the PLRR in the formation by the stakeholders-contractors of the resource flows of DP from the territorial-object “flows” and “sources” of resources for the realization of a specific and project-specific OTS of their life cycle. In particular, between the territorial logistics terminals and the property for certain resource-flow blocks and areas of PLRR: from the “source” of territorial-terminal flows to the “stock” and “source” of information

and terminal-object flows and further to the ordered area of object flows and to the object "stock" of resource flows.

As it can be seen in Figure 1, from the “source” of various resource territorial-terminal flows (Block IV, “source”), resource “sink” of mesological information flows (with a high level of entropy) with various resources for realization specific OTS project (Block V, “stock”) is formed in the territorial logistic terminals by stakeholders. In the future, based on it, the “source” resource (with a high level of entropy) of various terminal-object flows (Block V, “Source”) is “generated”.

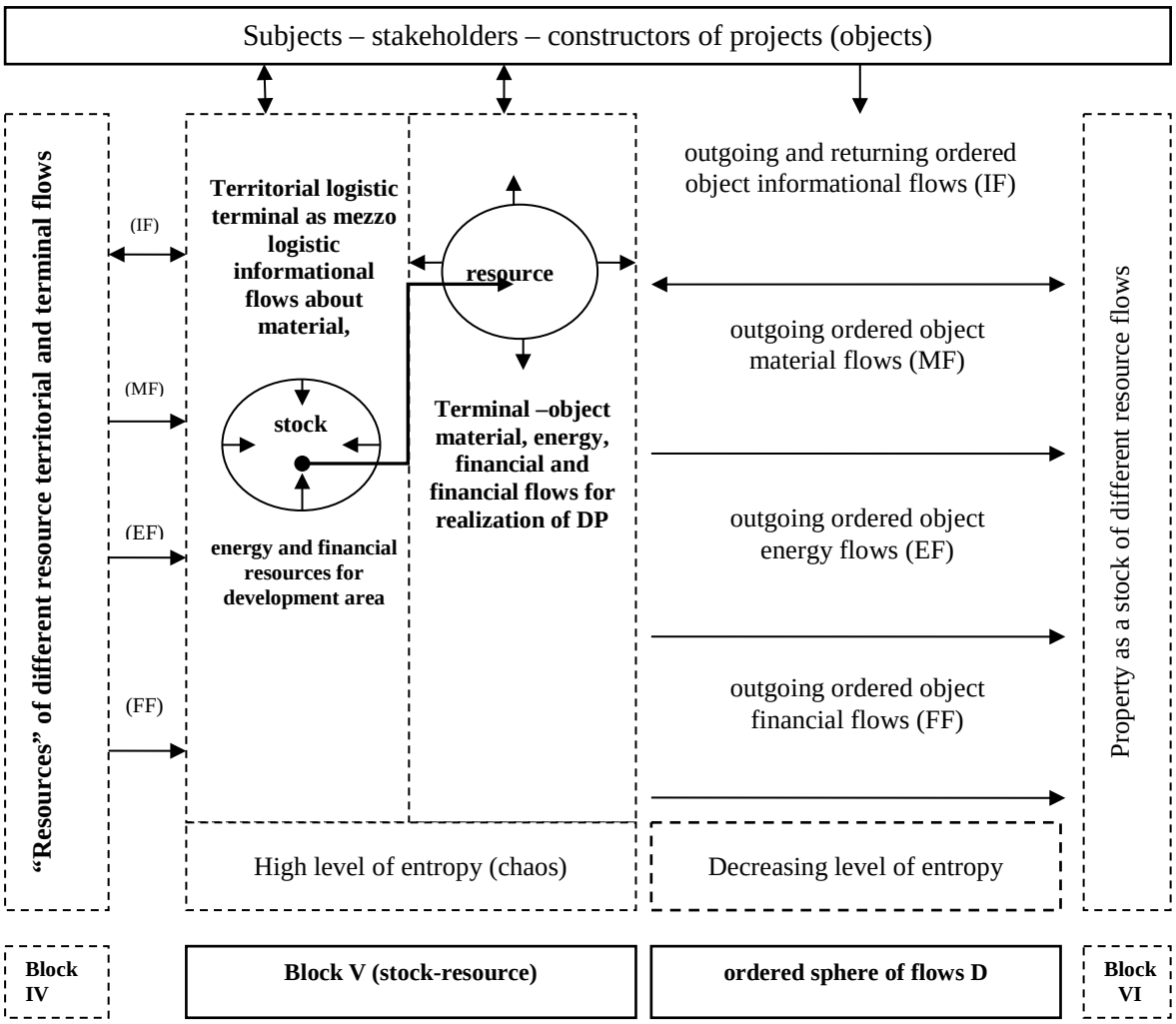

Figure 1. Fragment of the “project and logistics relay race” as a sequence of processes of management of the movement, orderliness and “transformations” of resource flows along OTS of LC of DP caused by interests and the purposes stakeholders – contractors

Stakeholders-contractors carry out at this OTS of DP the processes of ordering various object (outgoing and returning) flows with a corresponding decreasing the level of entropy (ordered sphere of flows D). The resource flows that are ordered in this way can form further on the newly created real estate object, an on-site ordered resource “stock” (Block VI, “stock”) of various resources.

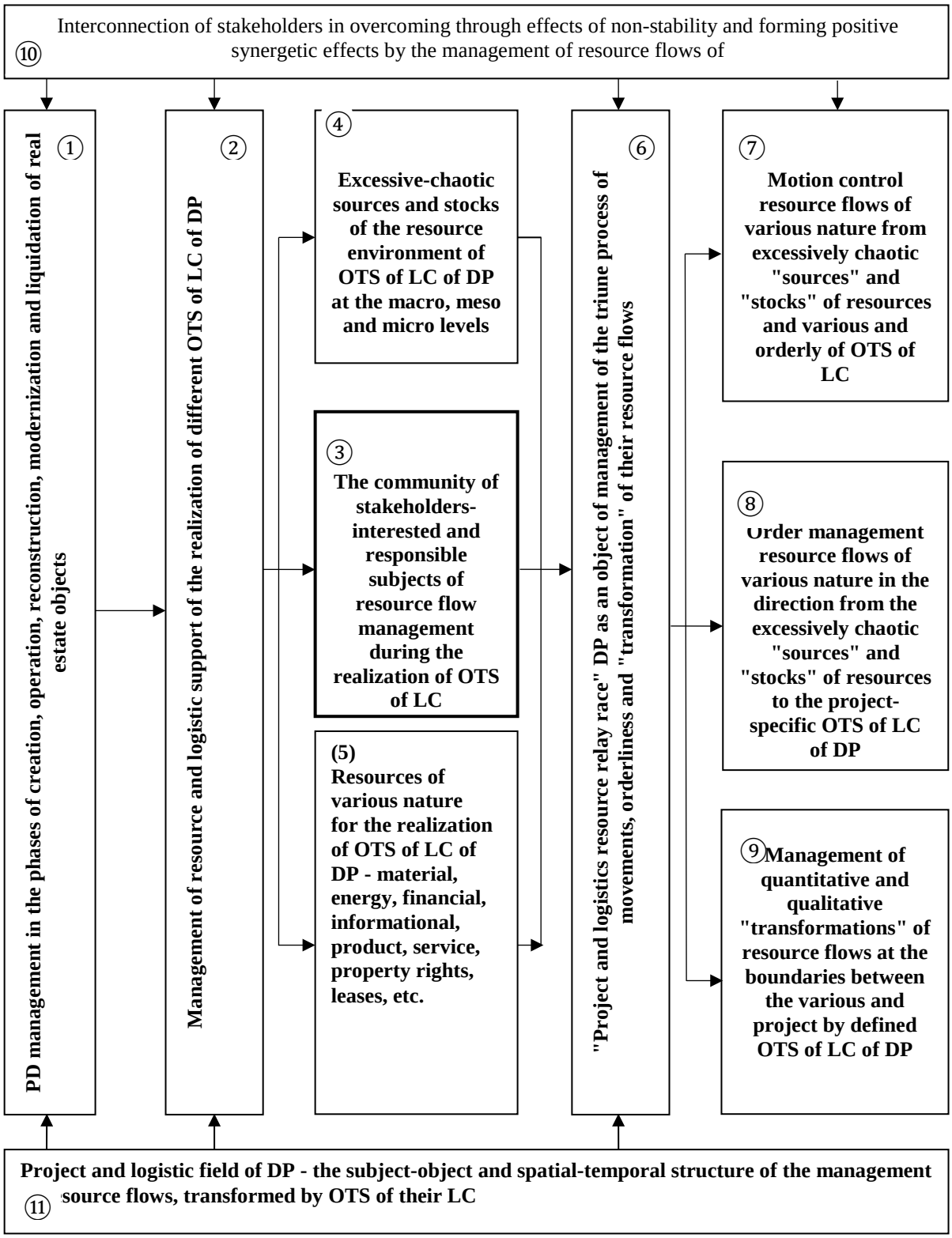

Figure 2. Theoretical and methodological approach to the management of DP resource flows in the creation, operation and improvement of real estate based on the design and logistic paradigm "orderliness out of chaos"

These flows complete the process of creating by stakeholders-constructors property owners (Block VI) as a “stock” of external resource flows of DP. They will be transformed on subsequent OTS projects into a multitude of “sources” and “stocks” of qualitatively different flow processes in the sphere of estate facilities operation. Among the transformable resource-operational flows can be called: flows of rights to the created real estate object; marketing-product, operational-commercial and product-service flows; material, energy, information and financial flows of production of products and services; economic and legal flows of purchase and sale of the property and its individual parts, etc.

Resource and operational flow processes can, in turn, re-generate at the macro, meso, and micro levels a wide variety of investment and construction resource flows for reconstruction and modernization, for capital and current repairs, and again for resource and operational flows on updated real estate objects. And in the future, and a variety of resource flows on the completion of projects, the liquidation of created real estate and the formation of ideas and concepts of new DP.

The above project and logistical aspects of the management of resource-flow processes of DP allow, taking into account their features, to form (Figure 2) a subject-object, space-time and their resource structure that changes in OTS their LC of structure of management of resource flows - PLF of resource-flow management of DP (11). This structure can be represented in the system of interaction between step by step changing subjects of management - stakeholders (3) and management objects – DP (1) – OTS of LC (2) - “sources-stocks” (4) - resources (5) - “project and logistics relay” (6) - movement of flows (7), orderliness of flows (8) - “transformations” of flows (9) - synergistic effects (10).

The main driving force behind the formation of the processes of project-logistic management of resource flows of DP are numerous and interacting with each other, stakeholders, ensuring, within their goals and interests, the realization of a specific development paradigm of managing flow processes - “orderliness from chaos”.

At the same way, for the first time, the model of managing the resource-flow processes of DP is presented in the study in the form of a “project-logistic relay race” of resource flows as a single triad of their movements, orderliness and quantitative and qualitative “transformations” from the randomly disordered external resource environment of projects and in the direction of their numerous and project named OTS.

7. Analysis of the results

Analysis of the results of the study of theoretical and methodological problems of project and logistic management of resource-flow processes in the realization of OTS of LC of DP shows the following.

Each DP is one-time and unique in terms of a variety of different flow processes, in a set of interrelated and mutually supporting goals and sub-goals, in non-recurring actions and interactions of stakeholders and in terms of value results, as well as in terms of project realization (often with an open date), used resources and numerous OTS of long-term LC of projects. By these features of DP it is different from cyclically functioning production and technological systems in the industrial sphere and significantly expands the boundaries of traditional IBP.

The management of resource flow processes by the OTS of DP plays a subordinate role in relation to the main project processes. At the theoretical and methodological interface of project management and their logistics, a specific project and logistic paradigm for managing resource-flow processes of long-term and unique DP - orderliness of project-logistic resource flow processes for OTS projects from the chaos of their redundant resource environment is firstly formulated in this paper. The realization of this managerial paradigm is carried out through the step by step, meaningful, and spatial-temporal "project and logistic relay race" of foreign-made resource flows of various natures, transformed in the direction to the project by named (ordered) OTS of DP.

The resource “relay race” also serves here as an organizational and managerial mechanism for the step by step transfer of initiative, goals, and interests in managing resource flow processes from one stakeholder to another. Some stakeholders “leave” the project after completing their activities at a specific OTS, others “enter” the next stage. Thus, in the process of realization of OTS of DP at the

moments of the “start” and “finish” of various resource flows there is a change in both the facilities and the subjects of management of the project and logistic flow processes. It necessitates the initiative of horizontal interaction between project stakeholders based on the exchange of their experience and competencies.

Part of the resource "relay race" in the sphere of cyclical industrial production (at the stage of operation of real estate) remains as the "supply chain" as a locally stable and sustainable process-logistic or production-logistic structures with fairly rigidly set "links" and an almost constant composition of stakeholders.

Overcoming the uncertainty, multiplicity and chaos of the resource flow environment of DP and the formation of ordered resource flow processes is carried out on the basis of the specific subject-object, space-time and OTS-changing structure – project flow field- for project management of the resource flow control projects.

In this frames of this “field” and on the basis of a new paradigm, the concept of managing the end-to-end constantly changing flow triad of interconnected processes of step by step movement, orderliness and quantitative and qualitative “transformations” of resource flows of OTS of various nature in time and space is firstly formed in this article.

The project and logistics relay race of resource flows of DP operates in its project and logistics field and is the real embodiment of the continued management paradigm.

The emergence of positive synergistic effects in the management of resource flow processes is ensured by self-organization and self-management, interest, responsibility and interaction of numerous and alternating teams of project stakeholders based on their goals, interests and categorical imperatives of purposeful behavior.

On the basis of the new approach, it can be built: systems of analysis, classification, structuring and forecasting of step by step resource flows of DP; models of a triune process through step by step movements, orderliness and quantitative and qualitative "transformations" of resource flows; forms and methods of interaction, interdependence and mutual influence of project stakeholders, generating the effects of self-organization and self-management of resource-flow processes.

The proposed theoretical and methodological approach opens new opportunities in the study and practical solution of the problems of managing project-logistical processes with the development of appropriate managerial paradigms in various fields. For example, in military and environmental projects or in projects for the realization of online commerce, etc.

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